

137-1957-12-23032

To the Problem of Obtaining Depressant Solutions (cont.)

structure has an improved depressant effect. For a structurally unaltered S it is recommended to utilize potato S, the water solutions of which must be obtained under uniform conditions and without the employment of chemical reagents. Since the solutions are subject to aging it is permissible to use only solutions which are 2-3 days old; however, fresh solutions prepared daily are needed for the investigation of the theory of the process. Bibliography: 15 references.

A. Sh.

1. Depressant solutions-Theory

Card 2/2

*Gorlovskiy, S.I.*

137-1958-2-2234

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 4 (USSR)

AUTHOR: Gorlovskiy, S.I.

TITLE: Flotation reagents in the USA (Flotatsionnyye reagenty SShA)

PERIODICAL: Obogashcheniye rud, 1957, <sup>2</sup>Nr 2, pp 53-68

ABSTRACT: A table is given of reagents put on the market in the US in 1956; it shows their flotation action, composition, and applications. Included are certain recommendations of the American Cyanamid Co. concerning the use of its reagents for concentrating ores of various types.

A.Sh.

1. Reagents--USA

Card 1/1

GORLOVSKIY, S. I.

"The work of the Mekhanobr Institute on Collectors and flotation modifiers"

report presented at the 4th Scientific and Technical Session of the Mekhanobr  
Inst, Leningrad, 15-18 July 1958

GORLOVSKIY, S.I.

NOCHANOVA, E.Z.; GORLOVSKIY, S.I.; and LAKOTA, B.M.

"Flotation of Brown Iron Ores and Slimes from Gravity Treatment  
of Manganese Ores."

report to be presented at the Intl. Mineral Processing Congress, London, England, 6-9 Apr 60.  
All-Union Scientific Research Institute for Mechanical Processing of Minerals, Leningrad.

GORLOVSKIY, S.I.

Use and manufacture of cation collectors. Obog. rud 5 no.1:  
7-12 '60. (MIRA 14:8)  
(Flotation--Equipment and supplies)

BOGDANOVA, Z.S.; CORLOVSKIY, S.I.; NECHAY, L.A.

Flotation of Chiatura deposit manganese slimes. Obog. rud 5  
no.6:3-7 '60. (MIRA 14:8)  
(Chiatura--Manganese ores) (Flotation)

S/137/62/000/003/032/191  
A006/A101

AUTHORS: Vlodavskiy, I. Kh, Gorlovskiy, S. I., Kusakova, G. M.

TITLE: The use of complex-forming collectors for tungstenite flotation

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 9 - 10, abstract  
3G69 ("Obogashcheniye rud", 1961, no. 3, (33) 3 - 7)

TEXT: Many of the known complex-forming reactive agents can be used in flotation practice. In particular,  $\alpha$ -nitrose- $\beta$ -naphthol was studied. However, its substantial deficiency is its limited solubility in products suitable to be used in combination with oil collectors. Therefore some other compounds were synthesized and tested as collectors; these compounds possess an analogous complex-forming group and are characterized by a better solubility in water or in petroleum hydrocarbons. This is a bisulfate derivative of  $\alpha$ -nitrose- $\beta$ -naphthol, 1-nitrose-2-naphthol-8-Na sulfoxide, dinitrose resorcin and nitro-derivatives of alkylated  $\beta$ -naphthol, soluble in organic substances. Experiments have shown that  $\alpha$ -nitrose- $\beta$ -naphthol and reagents obtained by nitrosation of alkylated  $\alpha$ -nitrose- $\beta$ -naphthol have a higher selective effect than oleic acid. Of the reagents tested the nitro-derivative of alkylated  $\beta$ -naphthol with an alkyl radical containing 8 - 12 C

Card 1/2

S/137/62/000/003/032/191  
A006/A101

The use of complex-forming...

atoms, is the most interesting one. It has a high selective effect and is cheaper than dimethyl glyoxime and cupferron; its solubility in organic solvents is better than that of  $\alpha$ -nitroso- $\beta$ -naphthol. This reagent makes it possible to obtain from a very hard to concentrate W-product a concentration degree as high as 44 after one refining, at a satisfactory extraction of the metal into the concentrate.

A. Shmeleva

[Abstracter's note: Complete translation]

Card 2/2

VARBYEV, T.I.; GORIOVSKIY, S.I.; ZASFIKHIN, N.V.; LIPKINA, T.Ye.; Irinimali  
uchastiye: LAZAREVSKIY, A.P.; ZELENOVA, I.M.; VOLOSNIKOVA, T.F.;  
TOMKOVID, Ye.I. [deceased]; PETROV, I.V.; MOSELOV, M.V.;  
NIKIFOROVA, D.I.

Use of high molecular organic depressants in the flotation of  
copper-nickel ores. Obog. rud 6 no.2:3-9 '61. (MIRA 14:8)

(Flotation--Equipment and supplies) (Nonferrous metals)

VLODAVSKIY, I. Kh. (deceased); GORLOVSKIY, S. I.; KURSAKOVA, G. M.

Use of complexing collectors for the flotation of wolframite.  
Obog. rud 6 no. 3:3-7 '61. (MIRA 14:11)  
(Wolframite) (Flotation)

VLODAVSKIY, I.Kh. [deceased]; GORLOVSKIY, S.I.

Flotation of quartz and iron minerals with cationic reagents.  
Obog. rud no.6:15-24 '61. (MIRA 15:3)  
(Flotation--Equipment and supplies) (Iron ores)

GORLOVSKIY, S.I.; KHAYNMAN, V.Ya.

Action of high molecular weight flocculants. Obog. rud 6 no.4:  
24-29 '61. (MIRA 15:1)

(Flocculation)

GORLOVSKIY, S.I.; ZASHIKHIN, N.V.; MYAGKOVA, T.M.; RYBKINA, V.V.

Ore flotation with use of higher xanthates. Obeg. rud 7 no.3:5-12 '62.  
(MIRA 16:4)

(Flotation)

TITKOV, N.P.; BOGDANOVA, Z.S.; GALAKTIONOVA, K.N.; KUROVA, M.D.; LAKOTA,  
B.M.; OZOLIN, L.T.; Primalni uchastiye: CHRKOVA, K.I.; ASHITKOV,  
Yu.R.; SMIRNOV, Ye.A.; FLATUNOV, A.A.; GALICH, V.M.; PATKOVSKAYA,  
N.A.; VLODAVSKIY, I.Kh.; GORLOVSKIY, S.I.

Outlook for introducing the flotation of ferrous metal ores.  
Gor. zhur. no.9:57-62 S '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut  
mekhanicheskoy obrabotki poleznykh iskopayemykh, Leningrad.  
(Flotation) (Iron ores) (Manganese ores)

VANEYEV, I. I.; Primalni uchastiye: GORLOVSKIY, S. I.; LIPKINA, S. I.;  
NIKIFOROVA, D. I.

Mechanism of the depressing action of carboxymethylcellulose  
on flotation-active silicates during the flotation of copper-  
nickel ores. Trudy Mekhanobr no. 131:75-88 '62. (MIRA 17:5)

GORLOVSKI, S.I. [Gorlovskiy, S.I.]

Applying macromolecular compounds in the flotation of sulfide minerals. *Analele metalurgie* 16 no.3:19-26 J1-S '62.

GORLOVSKI, S.I. [Gorlovskiy, S.I.]; HAINMAN, V.I. [Khaynman, V.I.]

Peculiarities of the action of macromolecular flocculants.  
Analele metalurgie 16 no.3:28-34 J1-S '62.

GORLOVSKIY, S.I.; RYBKINA, V.V.

Flotation reagents in the U.S.A. ~~Biul.tekh.-skoz~~.inform.Gos.  
nauch.-issl.inst.nauch. i tekhn.inform. 16 no.10:102-104 '63.  
(MIRA 16:11)

BAKINOV, K. G.; GORLOVSKIY, S. I.; ZASHIKHIN, N. V.; VANEYEV, I. I.; YEROPKIN, Yu. I.;  
KONEV, A. S.

"New Methods of Sulfide Concentrate Upgrading."

paper to be presented at the Intl Mineral Dressing Conf, New York City,  
20-24 Sep 64.

Inst "Mekhanobr," Leningrad.

SOPOCHKIN, L.A.; GORLOVSKIY, V.G.

Output element of the "Avtooperator" system. Avtom. i prib. no.2:  
23-28 Ap-Je '63. (MIRA 18:8)

1. Lisichanskiy filial Instituta avtomatiki Donetskogo soveta  
narodnogo khozyaystva.

ACCESSION NR: AT4042443

S/0000/64/000/000/0110/0111

BR

AUTHOR: Gorlovskiy, V. G.; Sopochnik, L. A.

TITLE: Electropneumatic digital-analog converter

SOURCE: Vsesoyuznoye soveshchaniye po pnevmo-gidravlicheskoj avtomatike. 5th, Leningrad, 1962. Pnevmo- i gidroavtomatika (Pneumatic and hydraulic control); materialy\* soveshchaniya. Moscow, Izd-vo Nauka, 1964, 110-111

TOPIC TAGS: automation, automatic control system, pneumatic control system, electro-pneumatic converter, digital analog converter

ABSTRACT: The paper describes an electropneumatic converter designed to produce an analog pneumatic signal which is proportional to a binary electric signal. The action of the converter is based on transforming the binary electric signal in proportion to the pneumatic conductivity, and then measuring the latter on a divider. The divider consists of a feed throttle and a discharging resistance whose conductance is adjusted in accordance with a binary law. Orig. art. has: 2 figures and 2 formulas.

ASSOCIATION: none

Card 1/2

ACCESSION NR: AT4042443

SUBMITTED: 29Jan64

SUB CODE: IE

NO REF SOV: 000

ENCL: 00

OTHER: 000

Card 2/2

S/271/63/000/003/035/049  
AC60/A125

AUTHORS: Gorlovskiy, V.G., Sopochnik, L.A., Tagayevskaya, A.A.

TITLE: Electropneumatic code converter for control computers

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 3, 1963, 43, abstract 3B251 (In collection "Diskretn. preobrazovateli i telemekhan. ustroystva dlya upravlyayushchikh vychisl. mashin.", Khar'kov, 1961, 113 - 119)

TEXT: The authors consider the construction and principle of operation of an electro-pneumatic code converter designed for converting the electrical output signal of a computer into a pneumatic control signal. The principle of operation of the code converter is based on the summing up of the air flows passing through a set of chokes connected in-parallel with different designated flow sections under constant pressure drop on the chokes. To increase the precision of the converter a pneumatic comparison element with a negative feedback loop is used in the device. The signal from the computer is fed in the form of a binary code signal to the windings of the electro-pneumatic valves corresponding to the

Card 1/2

Electropneumatic code converter for control computers

S/271/63/000/003/036/C49  
AC60/A126

code digits. If there is no signal, then all the summing chokes are closed and the pressure at the output of the converter establishes itself as equal to the back pressure. When a signal arrives from the output of the computer a part of the summing chokes depending on the code are connected to the atmosphere. Then on the output chokes a pressure drop is established proportional to the number of open summing chokes. The supply pressure is 2 atm; the back pressure is 0.2 atm; the range of variation of the output pressure is 0.2 - 1.0 atm; the operating voltage is 24 v; the power required is 6 w; the converter error is 1%. The construction of the converter is described in detail. There are 3 references.

A. S.

[Abstracter's note: Complete translation]

Card 2/2

GORIYA, V., master po gazoapparature.

Experience in operating automobiles on compressed gas. Avt.transp.  
32 no.9:20-21 S '54. (MLRA 7:11)

1. Kiyevskiy gruzovoy avtopark No. 1.  
(Automobiles--Engines (Compressed gas))

IONOV, Lev Pavlovich; GORLYSHKOV, Vladimir Pavlovich; LYUTFALIBEKOV,  
Farkhad Ashrafovich; ZHURAVLEV, B.A., red. izd-va;  
RODIONOVA, V.M., tekhn. red.

[Rural buildings that can be assembled in a few hours]  
Sel'skije postroiiki, sobiraemye za neskol'ko chasov. Mo-  
skva, Gosstroizdat, 1962. 78 p. (MIRA 16:3)  
(Farm buildings) (Buildings, Prefabricated)

IONOV, Lav Pavlovich; ~~GOLYBNIK~~ Vladimir Pavlovich

[rural structures assembled in a few hours; aid for  
the rural builder] Sel'skie postroiki, sobiraemye za  
neskol'ko chasov: ~~smoshni'~~ sel'skomu stroitel'iu.  
Izd.2., perer. i dop. Moskva, Stroizdat, 1967. 142 p.  
(MIRA 18:1)

GORMAKOV, S.D.

Methods of calculating the properties of polycomponent systems  
of any dimension from data for binary systems. Zhur. fiz. khim.  
34 no. 11:2431-2447 N '60. (MIRA 14:1)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-  
Lenina.

(Systems (Chemistry))

GORMAN, A.D., kand. tekhn. nauk

Action of steering gears of various kinds. Trudy IIVT no.45:  
66-72 '63. (MIRA 17:6)

BRYUKHOVETSKIY, V.D., inzh.; GORMAN, I.N., inzh.; DZYSYUK, A.A., inzh.;  
BRUSHLYAK, V.M., inzh.

Removal of iron from industrial condensate by means of filtration  
through a cellulose layer. Elek. sta. 32 no.12:61 D '61.  
(MIRA 15:1)

(Feed-water purification)

GORMAN, M.

Open class of an industrial training instructor. Prof.-tekh.  
obr. 19 no.5:29 My '62. (MIRA 15:5)

1. Nachal'nik otдела podgotovki kadrov Leningradskogo  
krutil'nonitochnogo kombinata imeni S.M. Kirova.  
(Leningrad--Textile workers--Education and training)

GORMAN, M.A.

New method for improving the qualifications of foremen. Tekst.  
prom. 25 no.10:89 O '65. (MIRA 18:10)

1. Nachal'nik otzela tekhnicheskogo obucheniya Pnyadil'no-  
nitochnogo kombinata imeni S.M. Kirova.

GORMATYUK, Yu.K.; SARKISYAN, A.S.

Results of calculations of currents in the North Atlantic  
by a four-level ocean model. Okeanologia 4 no.5:910 '64  
(MIRA 18:1)

GORBATYKH, Yu.A.; SARKISYAN, A.G.

Results of calculations of currents in the North Atlantic by a four-level model. Izv. AN SSSR. Fiz. atm. i okeana 1 no.3:313-326 Mr '65. (MIRA 18:5)

1. Institut prikladnoy geofiziki AN SSSR.

GORMAN, Yu.M., inzh.

Checking of the collectors of superheated steam of LMZ boilers.  
Energetik 12 no.6:12-13 Ja '64. (MIRA 17:9)

ROMANIKA, L.I.; GORMONOV, I.V., doktor geol.-mineral. nauk, otv.  
red.; SHERSHUKOVA, M.A., red.izd-va; NAUMOVA, G.D., tekhn.  
red.

[Predicting a change in the regime of underground waters;  
underground waters of the Volga artesian basin in connec-  
tion with hydraulic engineering] Prognoz izmeneniia rezhima  
podzemnykh vod; podzemnye vody Privolzhskogo artezianskogo  
basseina v sviazi s gidrotekhnicheskim stroitel'stvom. Mo-  
skva, Gosstroizdat, 1963. 129 p. (MIRA 16:6)

(Volga Valley—Water, Underground)

(Don Valley—Water, Underground)

GORMOV, V.K.

Corrections of errors made in nomograms for calculating the density and permeability of fractures. Trudy VNIGRI no.193:244-245 '62.

(MIRA 15:12)

(Oil sands—Permeability)

GOROVA, G.

"Study of Various Types of Peroxides as Initiators of Radical Copolymerization." D.  
T. I. Jurzhenko, G. H. Gorova and V. B. Helzer (p. 150)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1940, Volume 10, No. 9

GORN, A.G., inzh.

Experience in using dragline excavators for finishing off embankment  
cuts. Transp. stroi. 9 no.4:26-28 Ap '59. (MIRA 12:6)  
(Excavating machinery) (Railroads--Earthwork)

GORN, Aleksandr Grigor'yevich, inzh.; LISKOVETS, Simon Abramovich, inzh.;  
CHERNYAK, Solomon Natanovich, inzh.; SHAPIRO, Iosif Abramovich,  
inzh.; PONOMARENKO, S.A., red.; BOBROVA, Ye.N., tekhn.red.

[Experience in the demonstrative building of railroads] Opyt pokazatel'nogo stroitel'stva zheleznnykh dorog. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshchenia, 1960. 143 p.

(MIRA 13:5)

(Railroads--Construction)

LISKOVETS, S.A., inzh.; GORN, A.G., inzh.

Track-laying crews work in the communist way. Transp. stroi.  
12 no.5:9-11 My '62. (MIRA 15:6)  
(Siberia---Railroads---Construction)

GORN, A. G., inzh.; SLUTSKIY, Yu. Ya.

Laying of switches in two blocks. Transp. stroi. 13 no.4:9-11  
Ap '63. (MIRA 16:4)

(Railroads—Switches)

GORN, I.K.

USSR/Chemistry - Alcohols, Dehydration of  
Chemistry - Alcohols, Dehydrogenation of

Apr 48

"Studies in the Field of Catalytic Conversion of Alcohols Into Divinyl-Type Hydrocarbons: X, Study of the Reaction of the Formation of Piperylene in the Process for Obtaining Divinyl From Alcohol," Yu. A. Gorin, I. K. Gorn, Sci Res :ab, Experimental Factory imeni Acad S. V. Lebedev, 10 pp

"Zhur Obshch Khim" Vol XVIII (LXXX), No 4

Investigates decomposition of an equimolecular mixture of acetaldehyde and crotonaldehyde on S. V. Lebedev's modified catalyst, on its dehydration and degenerating, and dehydration components, and on a 70:30 mixture of them. Shows that under these conditions, formation of piperylene is very small. Suggests scheme of piperylene and amylene formation in Lebedev's process, based on the concept of condensation of acetone and acetaldehyde into ethylideneacetone with subsequent reduction and dehydration. Submitted 4 Feb 1947.

PA 8/49T36

GORN, I. K.

65/49721

USSR/Chemistry - Alcohols  
Catalysts

Apr 49

Research in the Field of the Catalytic Conversion  
of Alcohols into Hydrocarbons of the Divinyl Series;  
XIV. Contact Conversion of Tertiary Butyl Alcohol  
and Its Binary Mixtures by Methyl Alcohol and Form-  
aldehyde. \* Zn. A. Serin, I. K. Gorn, All-Union Sci-  
Res Inst Invent S. V. Lebedev, 4 1/2 pp

"Zaur Obshch Ezim" Vol XIX, No 4

Investigated contact conversion of tertiary butyl  
alcohol on the dehydrating component of the cata-  
lyst, and on a converted S. V. Lebedev catalyst

65/49721

USSR/Chemistry - Alcohols (Contd)

Apr 49

at 300° and 380°, showing that products of conden-  
sation of higher alcohols or hydrocarbons were not  
formed in these cases. Investigated catalytic con-  
version of the binary mixtures of tertiary butyl al-  
cohol by methyl alcohol and formaldehyde on mixed  
S. V. Lebedev catalysts with 95:5 and 98:2 as the ra-  
tio of the components at 300° and 380°, showing that  
complex products of condensation were not formed in  
these cases. Submitted 28 Jan 48.

65/49721

GORIN, Yu.A.; GORN, I.K.

Vapor phase catalytic hydration of acetylene and its derivatives.  
Part 3: Catalytic hydration of acetylene over various solid catalysts.  
Zhur.ob.khim. 28 no.9:2328-2333 S '58. (MIRA 11:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo  
kauchuka.

(Hydration)

(Acetylene)

5 (3)

AUTHORS:

Gorn, I. K., Gorin, Yu. A.

SOV/79-29-7-4/83

TITLE:

Investigation in the Field of Catalytic Hydration of Acetylene and Its Derivatives in the Vapor Phase (Issledovaniye v oblasti parofaznoy kataliticheskoy gidratatsii atsetilena i yego proizvodnykh). V. On the Influence of the Anions of Solid Catalysts (V. O vliyaniy anionov tverdykh katalizatorov)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2125 - 2129 (USSR)

ABSTRACT:

In order to investigate the influence exerted by anions upon the catalytic hydration of acetylene and its derivatives, the authors chose cadmium- and calcium salts of various acids. Cadmium served as an active cation, calcium, on the other hand, as an inactive cation (Ref 2). The latter was intended not to mask the catalytic properties of the anions. The simultaneous effect of some of these anions was investigated on catalysts with acid character, viz. phosphoric and tungstic acid and the anhydrides of molybdic and vanadic acid; these are compounds which are sufficiently stable and not volatile at high temperatures. All catalysts were tested at the same temperature, the same rate of flow of acetylene and its dilution with steam so that the ex-

Card 1/3

Investigation in the Field of Catalytic Hydration of Acetylene and Its Derivatives in the Vapor Phase. SOV/79-29-7-4/83  
V. On the Influence of the Anions of Solid Catalysts

periments differed only by their duration. Tungstate and the phosphates of cadmium proved to be the most active ones. The influence exercised by the anions of the salts on the hydration of acetylene in the vapor phase becomes manifest only in the case in which the catalyst contains a cation which is capable of activating acetylene or a hydrogen ion (proton). In the presence of an inactive cation the anions have hardly any effect (e.g.  $\text{Ca}^{++}$ ). The nature of the anion in cadmium salts seems to exercise no influence on the primary activation processes of acetylene and on the formation of polar complexes. The effect of the anion on the hydration of acetylene results only in a variable capability of transforming acetic anhydride into by-products. In table 1 the results of the catalytic activity of Cd- and Ca-salts are compared with those of the corresponding salts. There are 3 tables and 21 references, 17 of which are Soviet.

Card 2/3

Investigation in the Field of Catalytic Hydration of SOV/79-29-7-4/83  
Acetylene and Its Derivatives in the Vapor Phase.  
V. On the Influence of the Anions of Solid Catalysts

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo  
kauchuka imeni S. V. Lebedeva (All-Union Scientific Research  
Institute of Synthetic Rubber imeni S. V. Lebedev)

SUBMITTED: July 2, 1958

Card 3/3

S/079/60/030/011/020/026  
B001/B055

AUTHORS: Gorin, Yu. A., Svetozarova, V. M., Gorn, I. K., and  
Krupysheva, T. A.

TITLE: Investigation on the Catalytic Hydration of Acetylene and Its  
Derivatives in the Gas Phase. VII. Study on Copper-phosphate/  
Calcium-phosphate Catalysts

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 11, pp. 3817-3822

TEXT: Basing on the publications Refs. 1-8, the authors of the present work studied the action of copper phosphate and various other copper salts as agents for bringing about the hydration of acetylene. Calcium phosphate was used as second component, since Ref. 9 mentions the greater stability of catalysts prepared with this carrier. The authors tested the copper phosphate catalyst, and its mixtures with calcium phosphate. Calcium phosphate, which is inactive itself, is activated by addition of 0.01% copper phosphate, this activation increasing with higher percentages of copper phosphate up to a maximum at 0.3%. Higher percentages reduce the

Card 1/3

Investigation on the Catalytic Hydration of  
Acetylene and Its Derivatives in the Gas  
Phase. VII. Study on Copper-phosphate/  
Calcium-phosphate Catalysts

S/079/60/030/011/020/026  
B001/B055

activity. The authors were interested to find out how a variation in calcium-phosphate composition would affect the copper-phosphate/calcium-phosphate catalyst. Several catalysts were prepared which contained 0.1% copper phosphate applied to mixtures of secondary- and tertiary calcium phosphate of various compositions. It was shown that the application of 0.1 - 0.3% copper phosphate onto calcium phosphate leads to highly active and selective catalysts for the hydration of acetylene. It was found that the activity of the copper-phosphate/calcium-phosphate catalyst depends on its content of neutral and acid calcium phosphates. Catalysts of a composition approaching neutral tertiary phosphate have the highest activity. Addition of 0.1 - 0.3% of other copper (II) salts to the calcium phosphate has about the same effect as addition of the same amount of copper phosphate. The activity of catalysts prepared with metallic copper and copper (I) chloride is low. By applying the copper-phosphate/calcium-phosphate catalyst, prepared in the required manner, the hydration process of acetylene can be carried out in a 100 h working cycle at an average catalyst working life of 600 h. There are 1 table and 14 references:

Card 2/3

Investigation on the Catalytic Hydration of  
Acetylene and Its Derivatives in the Gas  
Phase. VII. Study on Copper-phosphate/  
Calcium-phosphate Catalysts

S/079/60/030/011/020/026  
B001/B055

11 Soviet, 2 US, 1 French, and 1 German.

SUBMITTED: October 24, 1959



Card 3/3

S/079/60/030/011/021/026  
B001/B055

AUTHORS: Gorin, Yu. A. and Gorn, I. K.

TITLE: Investigation on the Catalytic Hydration of Acetylene and Its Derivatives in the Gas Phase. VIII. On the Role of the Carrier in Two-component Catalysts During the Hydration of Acetylene to Acetaldehyde

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 11, pp. 3822-3826

TEXT: It is evidently still assumed by researchers that in the catalytic hydration of acetylene and its derivatives in the gas phase, the catalyst has no effect on the water molecule during its addition to the acetylenic bond. The authors of the present work, however, studied the activity of various two-component phosphate catalysts and obtained experimental results which indicate that the catalyst is actively involved in this stage of the reaction. In an earlier paper (Ref. 8), the authors found that the copper-phosphate/calcium-phosphate catalyst, among others, is very active and that the calcium phosphate itself is inactive, its only effect being that of

Card 1/3

Investigation on the Catalytic Hydration of Acetylene and Its Derivatives in the Gas Phase. VIII. On the Role of the Carrier in Two-component Catalysts During the Hydration of Acetylene to Acetaldehyde

S/079/60/030/011/021/026  
B001/B055

increasing the surface development of the active phosphate. In order to increase the surface of the catalyst by means of other carriers, activated carbon, burnt silica gel, and pumice were used in combination with active phosphates. The authors studied two types of catalysts, using copper sulfate as active agent for the one, and cadmium phosphate for the other type. The experimental data obtained for phosphate catalysts composed of two components, with different carriers, are listed in a table. These data show that not only calcium phosphate but other alkaline-earth phosphates also give active catalysts in combination with copper- and cadmium phosphates. The use of activated carbon, silica gel, and pumice as carrier for the phosphate gave catalysts with greatly reduced activity, and caused side-reactions as well. It is concluded from these data that the role of the catalyst in acetylene hydration in the gas phase is more complex than appears on first sight. It is thus shown that activated carbon, burnt silica gel, and pumice, the surfaces of which are seemingly electroneutral,

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Investigation on the Catalytic Hydration of Acetylene and Its Derivatives in the Gas Phase. VIII. On the Role of the Carrier in Two-component Catalysts During the Hydration of Acetylene to Acetaldehyde

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B001/B055

cannot be used as carriers for the above processes. Alkaline earth phosphates with their ionic crystal structure, however, prove to be good carriers for these catalysts. It was also found that the activity of the catalysts in the gas-phase hydration of acetylene is determined not only by their ability to activate acetylene, but is probably also determined by the effect of the catalyst on the reacting water molecules. This effect apparently consists of an additional polarization of the adsorbed water molecules under the influence of the ionic lattice of the catalyst or the carrier, thus easing the reaction of water with the activated acetylene molecules. There are 1 table and 11 references: 8 Soviet, 2 US, and 1 German. ✓

SUBMITTED: October 24, 1959

Card 3/3

GORN, I. K.

SPACE I BOOK EXPLANATION 807/3153

Gornov, I. F., and S. S. Kurbatov, 7th ed., eds.

Ukrainian Academy of Sciences Institute of Chemistry (Synthesis of Monomers for the Production of Synthetic Rubber) Kiev, 1960. 590 p. Errors all corrected. 4,500 copies printed.

Ukrainian Academy of Sciences Institute of Chemistry, Upravlennya Khimicheskimi Prirodoznavstvom i Khimiya.

Eds.: I. F. Gornov and S. S. Kurbatov, 7th ed., eds.

FOREWORD: This book is intended for scientists, engineers, and technicians working in the synthetic rubber, plastics, and petroleum refining industries, and in scientific research institutions affiliated with these industries.

CONTENTS: The book contains articles which report on research carried out at the Institute of Chemistry of the Ukrainian Academy of Sciences, the Institute of Chemistry of the Ukrainian Academy of Sciences, the Institute of Chemistry of the Ukrainian Academy of Sciences, and the Institute of Chemistry of the Ukrainian Academy of Sciences.

(State Scientific Research and Design Institute of the Synthetic Rubber Industry) in the synthesis of isoprene, acrylonitrile, acrylamide, and other initial products for synthetic rubber production. The articles also discuss methods of extracting these products from their preparatory media. No preambles are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

Foreword

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Synthesis of Monomers—(Cont.)

A. Gornov, I. F., and S. S. Kurbatov, 7th ed., eds. Vapor Phase Hydration of Acetylene into Acetaldehyde on Catalysts Not Containing Mercury 216

V. Gornov, I. F., and S. S. Kurbatov, 7th ed., eds. On Acetylene-Haber and Acrylonitrile-Alcohol Combination Reactions Under the Influence of Solid Catalysts 232

A. Gornov, I. F., and S. S. Kurbatov, 7th ed., eds. Hydration of Isoprenes of the saturated Compounds in Primary Methyl Alcohol at Normal Pressure 240

AVAILABLE: Library of Congress

807-3153

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JA/Am/esp  
5-26-61

11

GORIN, Yu.A.; GORN, I.K.

Vapor phase catalytic hydration of acetylene and its derivatives.  
Part 10: n-Pentenes, by-products of the hydration of acetylene  
to acetaldehyde on cadmium-calcium phosphate catalysts. Zh. r.  
org. khim. 1 no. 12:2090-2094 D '65 (MIRA 19:)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni Lebedeva. Submitted October 29, 1964.

KOVHATSKIY, M.A.; GORN, L.Ye.; GRODZENCHIK, N.A.; YERMAKOVA, P.M.; KONIKOVA, G.S.;  
KORNIGS, A.I.; KUZNETSOVA, M.V.; MEL'NIKOVA, L.A.

Silicosis, etiology, pathogenesis, and clinical aspects. Gig. sanit.,  
Moskva no.8:28-32 Aug 1952. (GML 23:2)

1. Of the Clinical Department of Leningrad Scientific-Research Institute  
of Labor Hygiene and Occupational Diseases.

Chronic poisoning with carbon monoxide. M. A. Kovnat-  
skii, L. B. Gorn, N. A. Grel'schinskii, and R. A. Kaban.  
*Trudovaya Zashchita* 1954, No. 2, 149-54; *Abstracts, KHU*  
1955, No. 1573.—The cumulative effect of poisoning with  
small quantities of CO observed in metal casting plants is re-  
ported. M. Hosh

MD 3

Problems in using methylene blue as antidote in poisoning  
by methemoglobin formers. R. N. Vol'ynskiy and I. I.  
L'vov. *Trudy Vsesoyuznogo Nauchno-Issledovatskogo  
Instituta Khimicheskoy Farmakologii i Toksikologii*  
1964, 17, 30. In clinical trials as antidote for poisons causing  
methemoglobinemia, methylene blue accelerated the  
methemoglobinemia 1.5 to 1.8 times over the rate of  
recovery without...

Julian I. Smith

GORN, L. E.

Photometric method of quantitative determination of carboxyhemoglobin in the blood. Fiziol.zhur. no.1:112-116 Ja-F '55 (MIRA 8:4)

1. Biokhimicheskaya laboratoriya Klinicheskogo otdela Gosudarstvennogo nauchno-issledovatel'skogo instituta gigiyeny truda i profzaboleveniy, Leningrad.

(HEMOGLOBIN,

carboxyhemoglobin, determ., photometric method)

GORAI, G.

U S S R

1. Rapid polarometric determination of lead in urine. I. E. Gory (Sci. Research Inst. Ind. Hyg. and Occupational Diseases, Leningrad). *Gigiena i Sanit.* 1955, No. 3, 41-3. — The specimen after evapn. with concd. HCl is lightly ashed at 200-300°, treated with 1:1 HNO<sub>3</sub>-H<sub>2</sub>SO<sub>4</sub>, heated to complete mineralization, finally at 600-700° taken up in 5% warm HCl, treated with NaOAc and ZnSO<sub>4</sub>, and the Pb content pptd. along with Zn by means of H<sub>2</sub>S. The centrifuged ppt. is taken up in HNO<sub>3</sub>, evapd., taken up in N NaOH and the plumbite is detd. polarographically (calibration curve shown). Sensitivity of 0.1 γ Pb is claimed in 0.1 ml. sample; the error is within 0.005 mg/l. G. M. Korolevskii.

Subject : USSR/Medicine AID P - 2190  
Card 1/1 Pub. 37 - 10/19  
Authors : Gorn, L. E., Senior Scientific Worker and  
Fridlyand, I. G., Prof.  
Title : Content of lead in the urine of healthy people. (To the  
diagnostics of lead poisoning)  
Periodical : Gig. i san., 5, 44-47, My 1955  
Abstract : This study attempts to determine by means of analyses  
the "normal" content of lead in the urine of people who  
have no contact with lead or its compounds in their pro-  
fessional activities. The results are discussed. Tables,  
3 Russian references (1936-1953).  
Institutions: Leningrad Institute of Industrial Hygiene and Occupational  
Diseases and the Chair of Occupational Diseases and  
Industrial Hygiene, Leningrad Institute of Advanced  
Studies for Physicians  
Submitted : F 16, 1954

USSR/Medicine - Physiology

FD-2712

Card 1/1

Pub. 33-21/28

Author : Gorn, L. E.

Title : A photometric method for the quantitative determination of carboxyhemoglobin in the blood

Periodical : Fiziol. zhur. 41, 112-116, Jan-Feb 1955

Abstract : Describes a simple photometric method, developed by the author, for the quantitative determination of carboxyhemoglobin in the blood, the method being based on the difference in the speed of alkaline denaturation of oxyhemoglobin and carboxyhemoglobin. Graphs; tables. Three references, all USSR (2 since 1940).

Institution : Biochemistry Laboratory of the Clinical Department of the State Scientific-Research Institute of Hygiene of Labor and Occupational Diseases, Leningrad.

Submitted : October 30, 1953

*Gorn, L.E.*  
USSR / General Biology. Physical and Chemical Biology

B-1

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 189

Author : Gorn, L.E.

Inst : Not Given

Title : Microspectrophotometric Apparatus for Cyto- and Histo-  
Chemical Analyses.

Orig Pub : Biofizika, 1956, 1, No 4, 396-398

Abstract : A description is given of a microspectro-photometric apparatus assembled from a standard SF-4 spectrophotometer (from which the source of illumination, monochromator, photoelement with an intensifier are used) and a microscope. The apparatus is intended for measuring the optical density of substances at different cell points.

Card : 1/1

GORN, L.E.

More about photometric determination of methemoglobin. *Vopr. i tok.*  
19 supplement:63-64 '56. (MLRA 10:7)

1. Leningradskiy nauchno-issledovatel'skiy institut gigiyeny truda  
i professional'nykh zabolevaniy.  
(PHOTOMETRY) (METHEMOGLOBIN)

GORN, L.B. (Leningrad)

Answer to critical comments by V.V.Popov and B.A.Sobchuk. *Fiziol.*  
zhur.42 no.9:826-827 S '56. (MLRA 9:11)

(BLOOD—ANALYSIS AND CHEMISTRY)

VOL'FSON, Z.G.; GABOVICH, R.D.; GORN, L.E.

"Chronic carbon monoxide poisoning"; a collection of papers from the Lvov Medical Institute. Reviewed by Z.G. Vol'fson, R.D. Gabovich, L.E. Gorn. Gig. i san. 24 no.1:90-92 Ja '59.

(MIRA 12:2)

(CARBON MONOXIDE--TOXICOLOGY)

GORN, L.E.

"Chemical methods for the analysis of biological material in industrial toxicology" by IA. Teisinger, S. Shkramovskii, I. Srbova.  
Reviewed by L.E. Gorn. Gig. truda i prof. zab. 4 no. 7:58 JI '60.

(MIRA 13:8)

(INDUSTRIAL TOXICOLOGY)

(TEISINGER, IA.) (SHKRAMOVSKII, S.) (SRBOVA, I.)

GORN, L.Ye.

Some physiochemical and chemical indices of the blood due to the  
effect of small doses of ionizing radiations. Med.rad. 5 no.6:  
25-26 '60. (MIRA 13:12)  
(BLOOD) (RADIATION---PHYSIOLOGICAL EFFECT)

GORN, L.E.; Prinizala uchastiye GURMAN S.M.

Nephelo-colorimetric method of determination of lead in biological fluids. Vop. med. khim. 8 no.6:625-627 N-D '62. (MIRA 17:5)

1. Kliniko-biokhimičeskaya laboratoriya Instituta gigiyony truda i professional'nykh zaboŭevaniy, Leningrad.

GORN, L.E.

Spectral properties of intraerythrocyte hemoglobin in individual cells of the mixed erythrocyte population. Biofizika 10 no.1: 110-117 '65. (MIRA 18:5)

1. Institut gigiyeny truda i professional'nykh zabolevaniy, Leningrad.

GORN, L.E.

Effect of dehydration on the parameters of Soret band  
of intraerthrocytic oxy- and methemoglobin. Biokhimiia  
30 no.6:1115-1121 N-D '65.

(MIRA 19:1)

1. Institut gigiyeny truda i professional'nykh zabolevaniy,  
Leningrad. Submitted October 24, 1964.

AUTHORS: Barilko, Sh.I., Gorn, L.S. and Khazanov, B.I. SOV/120-59-2-26/50  
TITLE: An Economical Scaler Based on Magnetic Cores  
(Ekonomichnoye pereschetnoye ustroystvo na magnitnykh serdechnikakh)

PERIODICAL: Pribery i tekhnika eksperimenta, 1959, Nr 2,  
pp 91-94 (USSR)

ABSTRACT: Toroids with five windings are used with transistors to give a scale of 10 that uses no current in the absence of a signal; the power consumption is 4 mW/kc. The system is a development from one suggested by Milnes (Ref 4) in which the units are blocking oscillators based on ferrite cores with rectangular hysteresis loops; these oscillators have two stable states. The ferrite used has a coercive force of only 0.1 oersted, so the coils have only between 10 and 30 turns (Fig 4 shows the circuit). The switching time is about 2 msec, but effects in the transistors limit the resolving time to about 5 msec. The device works reliably over the range from -40 to +60 °C, although the threshold falls linearly with temperature (because the hysteresis loops become narrower). A plug-in unit built up on this basis is

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SOV/120-59-2-26/50  
An Economical Scaler Based on Magnetic Cores

shown in Fig 5. The stored information is not lost even if the power is disconnected, but additional circuits are required if the stored data must be read off.

There are 5 figures and 4 references, all of which are English.

Card 2/2

SUBMITTED: February 26, 1958

GORN, L.S.; KHAZANOV, B.I.

Precision mean counting-rate meter. App.dlia iad. spek. no.1:77-  
83 '60. (MIRA 14:8)

(Radiation--Measurement)

GORN, L.S.; IVANOV, I.D.; KHAZANOV, B.I.

Characteristics of a precision single-channel amplitude  
analyzer. App.dlia iad. spek. no.1:93-108 '60.

(MIRA 14:8)

(Spectrometer)

GORN, L.S.; IVANOV, I.D.; KHAZANOV, B.I.

Automation of measurements of amplitude distribution.  
App.dlia iad. spek. no.1:109-115 '60. (MIRA 14:8)  
(Spectrometer)

GORN, L.S.; KHAZANOV, B.I.; PCHELINTSEVA, G.M., red.; VLASOVA, N.A.,  
tekh. red.

[Transistors in radio measurement equipment] Tranzistory v radio-  
metricheskoi apparature. Moskva, Gos.izd-vo lit-ry v oblasti atom-  
noi nauki i tekhniki, 1961. 170 p. (MIRA 14:12)  
(Transistors) (Radio measurements)

20693

9.4310 (114, 1150, 1154, 1155)

S/120/61/000/001/031/062  
E194/E184

AUTHORS: Gorn, L.S., and Khazanov, B.I.

TITLE: A Reversible Coding Circuit Based on Ferrite-Transistor Cells

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.1, pp.102-105

TEXT: Ferrite-transistor cells are used to measure the difference between the number of impulses received from two detectors in solving problems associated with the recording of radioactive radiations. This article briefly describes a ferrite-transistor difference reversible coding circuit, the circuit diagram of which is given in Fig.1. For simplicity this shows only two binary cells. The binary cell consists of two blocking generators between which the coupling transformers are based on ferrites with square hysteresis loops. The nominal direction of magnetisation of the ferrite in the circuit coincides with the direction of flow of current in the windings. Each of the transformers has five windings, of which numbers 1 and 2 are base and collector windings of the blocking generator of the cell, 3 and 4 are starter windings and 5 is a coupling winding with the Card 1/ 4

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E194/E184

A Reversible Coding Circuit Based on Ferrite-Transistor Cells

selector circuit of the second cell of the trigger. A current impulse applied to the starter circuit displaces the operating point on the magnetic characteristic of the core. For core  $T_{p2}$  the point is on the horizontal section of the characteristic and regeneration is impossible. For the core  $T_{p1}$  the working point is rapidly displaced to the bend in the magnetic characteristic after which the blocking process occurs. During the process of regeneration of the impulse the current of the triode  $T_1$  acts through the coupling winding on the core  $T_{p2}$  to reverse its condition. An impulse of positive voltage is developed in the collector triode  $T_1$ . As the next current impulse is applied to the starter circuit the core again alters its direction of magnetisation and returns to the initial condition. This is accompanied by the development of positive voltage impulse in the collector triode  $T_2$ . The binary triggers are connected in series through diodes with series resistances which govern the amplitude of the starting current impulse. In the initial condition when there is no signal the cells take no current.

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E194/E184

### A Reversible Coding Circuit Based on Ferrite-Transistor Cells

The starting windings are connected to the outputs of the repeater emitters  $T_5$  and  $T_6$  which are normally closed. Simultaneously with the application of starting signals to input I (subtraction) formed impulses are applied to the repeater emitter  $T_5$ . The output impedance of the open emitter repeater is low and the triode  $T_5$  which had previously kept open the coupling circuit between the triggers now closes. On application of the input signal II (addition) a similar impulse is applied to the emitter of repeater  $T_6$ . The duration of control signals is made somewhat greater than the possible delay time of operation of the last trigger relative to the input signal. The actual system consists of a diode-triode coincidence circuit where the current resulting in the presence of coincidence is used to start a ferrite-transistor cascade. This is a simple circuit with few parts. The semiconductor triodes act as keys so that the demands made on them are not stringent and the circuit is not critical to change of parts or to variations in supply voltage. Moreover, the coupling transformers reduce to a minimum the influence of

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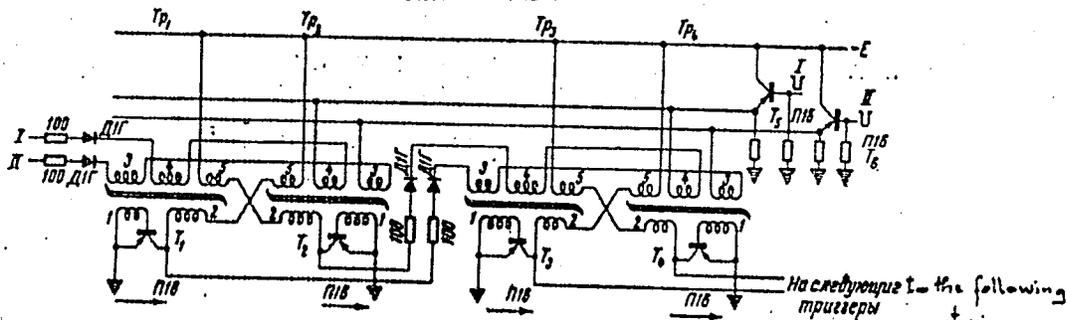
20693

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A Reversible Coding Circuit Based on ..E194/E184

out-of-balance current and the temperature limits of operation of the circuit are determined only by changes in the coercive force of the magnetic cores.

There are 1 figure and 1 Soviet reference.



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Fig.

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E192/E382

9,7500

AUTHORS: Gorn, L.S., Ol'dekop, L.G. and Khazanov, B.I.

TITLE: A Reversible Dekatron Counter

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 2,  
pp. 83 - 85

TEXT: A counter circuit capable of registering directly the difference in the counting speeds of two channels is very useful in evaluating the background radiation, determining the difference in the amplitude-distribution spectra and other measurements. The reversible counters based on vacuum tubes are known (Ref. 1) but they are not entirely satisfactory due to their complexity. The two-pulse dekatron, type  $0Г-5$  (OG-5), can be used in the reversible counters in view of their symmetrical construction. The resulting circuits are comparatively simple. Constructionally, a dekatron is provided with a cylindrical anode which is surrounded by a set of 30 rods playing the part of sub-cathodes (for transferring the glow discharge) and cathodes (Ref. 2). There are various possibilities of arranging the drive circuits for the dekatrons  
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A Reversible Dekatron ....

and the system adopted by the authors is illustrated in the figure. In this the triggering of the dekatrons is performed by amplifying stages. The principle of operation of the counter given in the diagram is as follows. The triggering circuit is based on a double triode  $\mathcal{N}_1 (= L_1)$ , which drives

the dekatron  $L_2$ . Two RC networks are connected between the anode resistors of this amplifying stage; these provide a different sequence of the output pulses, depending on whether the input signal is applied to the righthand or lefthand half of the tube. The signals applied to the righthand-side triode are taken from the adding input stage and produce a negative pulse at the anode load. This pulse is differentiated by one of the networks and integrated by the other network; a time shift between the two pulses is thus produced. The differentiated pulse is applied to the first sub-cathode of the dekatron and the integrated signal (delayed in time) to the second sub-cathode. In this way the information applied to the dekatron "moves" clockwise. The signals from the

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E192/E382

A Reversible Dekatron ....

subtraction input stage (see the figure) are applied to the lefthand-side triode; the signal produced across the anode load is again differentiated and integrated but the rôle played by the two networks is now reversed. Thus, the differentiated signal is applied to the second sub-cathode, while the integrated pulse is fed to the first sub-cathode. Consequently, the discharge in the dekatron "moves" anti-clockwise. When several reversible dekatron stages are to be connected, it is necessary to obtain two signals at its output: one of these corresponds to the transition of the dekatron through zero, while the information is added, and the second signal corresponds to the transition from zero during subtraction. Consequently, each stage of the counter (except the first) is provided with a thyatron relaxation pulser (based on  $L_4$ ) and a limiter amplifier  $T_7$  based on a transistor, type  $\Pi 11$  (P11). A positive pulse is produced across the cathode load of the thyatron when the dekatron reaches its zero state. This signal is differentiated and applied to the grid of the righthand-side triode  $L_3$  (addition). As regards the  
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A Reversible Dekatron ....

transistor  $T_7$ , its collector load is chosen so that it operates under saturation conditions when the dekatron is in its zero state. The transition of the cathode from the zero state results in the elimination of the saturation current and a positive pulse is produced at the collector of  $T_7$ ; this is then applied to the lefthand-side grid of the double triode  $L_3$  (subtraction). The subtraction signal will be obtained every time the dekatron undergoes transition from its zero state into the position "9" as well as into the position "1". The thyatron  $L_4$  operates in a similar way so that the output signals are ambiguous. The situation is rectified by introducing a coincidence circuit. Thus, normalising univibrators are provided at the inputs of the two channels;  $T_1$  and  $T_2$  at the input of the adding channel and  $T_4$  and  $T_5$  at the subtraction input. The signals produced by these univibrators are amplified by emitter followers  $T_3$  and  $T_6$

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S/120/61/000/002/013/042

E192/E322

A Reversible Dekatron ....

from where the positive pulses are applied to diode coincidence circuits. In the addition channel, this circuit is based on diodes  $A_5 (= D_5)$  and  $D_6$ . In the subtraction channel, the circuit is based on  $D_5$  and  $D_4$  and this permits the transmission of the signal to the next stage only in the case when the dekatron undergoes a transition from the zero state to the position 9. A counter capable of registering 100 000, based on 5 dekatrons type CG-5, 5 triodes, type 6H6P (6N6P) and 10 transistors as well as 4 thyratrons, was built on the basis of the above circuit. The equipment was stable in operation when the supply voltage was varied by  $\pm 10\%$ . There are 1 figure and 3 references: 1 Soviet and 2 non-Soviet.

SUBMITTED: February 26, 1960

Card 5/6

I 10070-63 EWT(d)/EWT(m)/BDS--AFTTC/ASD

ACCESSION NR: AR3000348

S/0058/63/000/004/A052/A053

SOURCE: RZh. Fizika, Abs. 4A417

AUTHOR: Bogdanov, A. A.; Gorn, L. S.; Khazanov, B. I.

TITLE: Portable apparatus for difference measurements 14

CITED SOURCE: Sb. rabot po nekotorym vopr. dozimetrii i radicketrii ionizir. izlucheniya. Vyp. 2. M., Gosatomizdat, 1961, 63-69

TOPIC TAGS: Differential counting rates, portable apparatus

TRANSLATION: The general principles are considered of the radiometric and dosimetric measurements of the difference in the counting rates of detecting apparatus. Certain particular cases of difference measurements and their specific features are described. The relative advantages and shortcomings of differential circuits of various types are described and discussed. Some differential equipment developed recently is described, namely, the DSI-1 <sup>A</sup> radiometer, intended for the analysis of the content of uranium in non-equilibrium

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I 10070-63  
ACCESSION NR: AR3000348

2

uranium ore using the complex Beta-Gamma method; a 2-channel counting apparatus which permits simultaneous registration of the counting rate in one of the channels and of the difference in the counting rates in the other channel; a 2-channel pulse height analyzer, in which the pulses from the outputs of the channels are subtracted in a definite proportion (AI-2 spectrometric equipment).<sup>0</sup> The operating principle of these devices and their main characteristics are considered in detail.

DATE ACQ: 14 May 63

ENCL: 00

SUB CODE: PH

lm/ jcu  
Card 2/2

BOGDANOV, A.A.; GORN, L.S.; KHAZANOV, B.I.

Ferrite-transistor decade of higher resolution. Prib. i tekhn.  
eksp. 6 no.2:87-88 Mr-Ap '61. (MIRA 14:9)  
(Nuclear counters)

GORN, L.S.; ZHURINA, L.S.; KHAZANOV, B.I.

Spectrometric amplifier with semiconductor triodes. Fri. i  
tekh. eksp. 6 no.2:89-90 Mr-Ap '61. (MIRA 14:9)  
(Amplifiers (Electronics))

GORN, L.S.; KHAZANOV, B.I.

Use of an emitter follower for the conversion of the current pulse of  
a photoelectron multiplier to a voltage pulse. Radiotekh. i elektron.  
no. 6:1010-1014 Je '61. (MIRA 14:6)  
(Cathode followers) (Electric current converters)

BABICHENKO, S.I.; BOGDANOV, A.A.; GORN, L.S.; KAGAN, M.L.; KRYLOV,  
L.N.; OL'DEKOP, L.G.; KHAZANOV, B.I.; MELESHKO, V.K., red.;  
DRUZHININA, L.V., tekhn. red.; POPOVA, S.M., tekhn. red.

[Radiometric process instrumentation] Kontrol'no-izmeritel'-  
naia radiometricheskaia apparatura. [By] S.I.Babichenko i dr.  
Moskva, Gosatomizdat, 1963. 148 p. (MIRA 16:12)  
(Radiometry)

GORN, L.S.; KRASHENINNIKOV, I.S.; KHAZANOV, B.I.; MELESHKO, V.K.,  
red.; VLASOVA, N.A., tekhn. red.

[Electronics in nuclear spectrometry]Elektronika y spektrometrii  
iadernykh izlucheni. [By]L.S.Gorn, I.S.Krasheninnikov, B.I.  
Khazanov. Moskva, Gosatomizdat, 1963. 291 p. (MIRA 16:3)  
(Nuclear counters) (Spectrometry)

ACCESSION NR: AT3012196

S/2963/63/000/005/0063/0079

AUTHORS: Gorn, L. S.; Khazanov, B. I.

TITLE: Transistorized amplitude time converter for multichannel analyzers

SOURCE: Mnogokanal'ny\*ye izmeritel'ny\*ye sistemy\* v yadernoy fizike. Nauchno-tekhnicheskiy sbornik. Moscow, no. 5, 1963, 63-79

TOPIC TAGS: multichannel analyzer, transistorized multichannel analyzer, amplitude time conversion, transistorized input unit, temperature dependence

ABSTRACT: It is pointed out that the multichannel-analyzer elements most difficult to transistorize are the measuring units, since the temperature dependence of the transistor parameters, the fact that the input circuit of the conducting transistor draws current, and the fact that an uncontrolled collector current flows all great-

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ACCESSION NR: AT3012186

ly influence the accuracy of the measurements. Consequently different circuits are considered for transistorized multichannel-analyzer input units, in which measures are taken to ensure that the accuracy is not worse than that of vacuum tube units. Since most multichannel analyzers use input units that convert the amplitudes of the incoming signals into time intervals by charging and discharging a capacitor, these operations are considered in greatest detail. An amplitude-time converter circuit with transistors is described and its errors analyzed. Orig. art. has: 5 figures and 20 formulas.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 16Oct63

ENCL: 01

SUB CODE: NS, SD

NO REF SOV: 002

OTHER: 002

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GORN, L.S.

Networks of linear transistor keying circuits. Mnogokan. izm.  
sist. v iad. fiz. no.5:80-86 '63. (MIRA 16:12)

ACCESSION NR: AR4022430

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SOURCE: RZh. Fizika, Abs. 1A256

AUTHOR: Corn, L. S.; Ivanov, I. D.; Khazanov, B. I.

TITLE: Single channel amplitude-time transistorized analyzer

CITED SOURCE: Tr. 5-y Nauchno-tekhn. konferentsii po yadern. radioelektronike. T. 2. Ch. 1. M., Gosatomizdat, 1963, 107-113

TOPIC TAGS: amplitude time analyzer, transistorized analyzer, single channel analyzer, two dimensional analyzer, anticoincidence circuit, differential discriminator

TRANSLATION: A single-channel amplitude-time transistorized analyzer, which is the simplest variant of a two-dimensional analyzer, is described. The analyzer has two inputs, one for the investigated pulses from the pickup and the other for the starting signal. The

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signals from the pickup are selected by a single-channel differential discriminator which turns on the amplifier, the upper and lower level discriminators, and the anticoincidence selection circuit. The starting signal triggers in succession two stages that generate signals of fixed duration; one sets the delay of the time interval relative to the starting signal and the other sets the magnitude of this interval. The pulse from the timing channel opens a gating unit whose pulses are fed to the recorder. The latter fixes the number of pulses corresponding to a definite radiation energy and lying within a definite time interval, which can be shifted relative to the starting signal. The operation of individual analyzer elements and units is examined in detail. L. I.

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AUTHORS: Gorn, I. S., and Khazanov, B. I.  
TITLE: Capacitor charge error in analog memory systems  
PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 3, 1963,  
527-530

TEXT: The authors consider capacitor charge errors which occur when the capacitor is charged through a silicon diode as in analog-to-digital systems and in particular in multi-channel analyzers. Starting with the Kirchnoff equation for the charging circuit in which the source impedance is assumed to be zero, an expression is obtained for the time dependence of the charging current and converted into normalized variables. The time unit  $t_0$  is taken as a parameter characterizing the duration of input pulses, e.g., rise time of exponential pulses. The time variation of the current is discussed and plotted for  $t_0 = 0.5 \mu\text{sec}$

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